

CLAIMS

1. A table-based wired information system comprising:

a table having a plurality of actual positions designed to receive people;

a monitor system, including a monitor positioned so as to be observed by people at any of the plurality of actual positions;

a plurality of vote boxes, one each affixed at each of the plurality of actual positions, each vote box including a switch with at least two positions; and

a flat ribbon cable assembly having first and second ends and a plurality of electrical conductors extending between the ends, the flat ribbon cable assembly being coupled to the monitor system and each of the vote boxes being coupled to the flat ribbon cable assembly intermediate the first and second ends.

2. A table-based wired information system as claimed in claim 1 wherein the monitor system is constructed with a plurality of available positions at least equal to the plurality of actual positions, and the plurality of available positions is greater than the plurality of electrical conductors in the flat ribbon cable assembly.

3. A table-based wired information system as claimed in claim 2 wherein the monitor system multiplexes information coupled between the flat ribbon cable assembly and the monitor system to allow the plurality of available positions to be greater than the plurality of electrical conductors.

4. A table-based wired information system as claimed in claim 1 wherein the plurality of vote boxes are attached to an under-surface of the table by an adhesive to secrete them.

5. A table-based wired information system as claimed in claim 1 wherein the switch included in each of the vote boxes includes a push button switch.

6. A table-based wired information system as claimed in claim 1 wherein the flat ribbon cable assembly is coupled to the monitor system through an adapter box and a round flexible cable, one end of the round flexible cable being coupled to the flat ribbon cable assembly by the adapter box and to the monitor system at another end.

7. A table-based wired information system as claimed in claim 1 wherein the flat ribbon cable assembly includes an adhesive backing including a flat ribbon cable with double-sided adhesive tape adhesively affixed to one flat side.

8. A table-based wired information system as claimed in claim 7 wherein each of the vote boxes of the plurality of vote boxes is coupled to the flat ribbon cable by a press-on insulation displacement connector.

9. A table-based wired information system as claimed in claim 8 wherein the press-on insulation displacement connector is a two-part connector with a first part of the two-part press-on insulation displacement connector positioned on an under-surface of the table so as to be sandwiched between the under-surface of the table and the flat ribbon cable assembly and a second part of the two-part press-on insulation displacement connector includes electrically conductive blades extending through an insulation of the flat ribbon cable so as to make electrical contact with the electrical conductors therein.

10. A table-based wired information system as claimed in claim 9 wherein each of the vote boxes of the plurality of vote boxes is coupled to the flat ribbon cable by plugging into one of the two-part press-on insulation displacement connectors.

11. A table-based wired information system as claimed in claim 10 wherein each of the vote boxes of the plurality of vote boxes is constructed with spaced apart mounting flanges defining a flat mounting surface with a centrally

located channel designed to allow clearance for the flat ribbon cable assembly and to receive the two-part press-on insulation displacement connector therein.

12. A table-based wired information system as claimed in claim 1 wherein the monitor system includes a microcomputer (MCU) programmed to tally votes registered by the plurality of vote boxes.

13. A table-based wired information system comprising:

a table having a plurality of actual positions designed to receive people;

a monitor system, including a monitor positioned so as to be observed by people at any of the plurality of actual positions, the monitor system being constructed with a plurality of available positions at least equal to the plurality of actual positions;

a flat ribbon cable assembly with adhesive backing, the flat ribbon cable assembly having first and second ends and a plurality of electrical conductors extending between the ends, the plurality of available positions being greater than the plurality of electrical conductors in the flat ribbon cable assembly, the flat ribbon cable assembly being coupled to the monitor system, and the flat ribbon cable assembly being affixed to an under-surface of the table in a flat orientation by the adhesive backing; and

a plurality of vote boxes, one each positioned on the under-surface of the table at each of the plurality of

actual positions, each vote box including a multi-position switch, and each of the vote boxes being coupled to the flat ribbon cable assembly intermediate the first and second ends by a press-on insulation displacement connector.

14. A table-based wired information system as claimed in claim 13 wherein the monitor system includes a microcomputer (MCU) programmed to tally votes registered by the plurality of vote boxes.

15. A table-based wired information system as claimed in claim 13 wherein the switch included in each of the vote boxes includes a push button switch.

16. A table-based wired information system as claimed in claim 13 wherein the flat ribbon cable assembly is coupled to the monitor system through an adapter box and a round flexible cable, the round flexible cable being coupled at one end to the flat ribbon cable assembly by the adapter box and to the monitor system at another end.

17. A table-based wired information system as claimed in claim 13 wherein the flat ribbon cable assembly includes an adhesive backing including a flat ribbon cable with double-sided adhesive tape adhesively affixed to one flat side.

18. A table-based wired information system as claimed in claim 13 wherein the insulation displacement connector includes two-parts, a first part of the two-part press-on insulation displacement connector is positioned on an under-surface of the table so as to be sandwiched between the under-surface of the table and the flat ribbon cable assembly and a second part of the two-part press-on insulation displacement connector includes electrically conductive blades extending through an insulation of the flat ribbon cable so as to make electrical contact with the electrical conductors therein.

19. A table-based wired information system as claimed in claim 13 wherein each of the vote boxes of the plurality of vote boxes is constructed with spaced apart mounting flanges defining a flat mounting surface with a centrally

located channel designed to allow clearance for the flat ribbon cable assembly and to receive the two-part press-on insulation displacement connector therein.

20. A table-based wired information system as claimed in claim 13 where the multi-position switch in each of the vote boxes includes a FBLRU-type control.

21. A table-based wired information system as claimed in claim 13 including a PC coupled to the monitor system.

22. A table-based wired information system as claimed in claim 13 wherein the monitor system includes a microcomputer programmed for pre-discharging capacitance of the cable, prior to receiving information.

23. A table-based wired information system as claimed in claim 13 wherein the monitor system includes a

microcomputer programmed to provide encryption checks to detect tampering.

24. A method of mounting a table-based wired information system on a table comprising the following steps performed in any convenient sequence:

providing a table having a plurality of actual positions designed to receive people, the table having an under-surface accessible at each of the plurality of actual positions;

providing a monitor system constructed with a plurality of available positions at least equal to the plurality of actual positions, the monitor system including a monitor;

positioning the monitor so as to be readable by people at any of the plurality of actual positions;

providing a flat ribbon cable assembly with adhesive backing, the flat ribbon cable assembly having first and second ends and a plurality of electrical conductors extending between the ends with the plurality of available positions being greater than the plurality of electrical conductors in the flat ribbon cable assembly;

adhesively affixing the flat ribbon cable assembly to the under-surface of the table in a flat orientation using the adhesive backing;

coupling the flat ribbon cable assembly to the monitor system;

providing a plurality of vote boxes, each vote box of the plurality of vote boxes including a multi-position switch; and

adhesively attaching one each of the plurality of vote boxes to the under-surface of the table at each of the plurality of actual positions and coupling each of the vote boxes to the flat ribbon cable assembly intermediate the first and second ends by a press-on insulation displacement connector.

25. A method as claimed in claim 24 wherein the step of adhesively affixing the flat ribbon cable assembly to the under-surface of the table includes forming a gap between the flat ribbon cable assembly and the under-

surface of the table at each of the plurality of actual positions.

26. A method as claimed in claim 25 wherein the step of coupling each of the vote boxes to the flat ribbon cable assembly with a press-on insulation displacement connector includes providing a two-part press-on insulation displacement connector, positioning a first part of the two-part press-on insulation displacement connector in the gap at each actual position, forcing electrically conductive blades of a second part of the two-part press-on insulation displacement connector through an insulation of the flat ribbon cable assembly so as to make electrical contact with the electrical conductors therein at each actual position, and plugging the one each of the plurality of vote boxes into one of the two-part press-on insulation displacement connectors.

27. A method as claimed in claim 26 where in the step of forcing electrically conductive blades through the insulation of the flat ribbon cable assembly, pressing the second part of the two-part press-on insulation

displacement connector toward the first part of the two-part press-on insulation displacement connector, also forces out a substantial portion of the adhesive backing from between the first and second parts.

28. A method as claimed in claim 24 wherein the step of providing a flat ribbon cable assembly with adhesive backing includes the steps of providing a desired length of flat ribbon cable with a plurality of electrical conductors, providing a substantially equal length of double-backed adhesive tape, and pressing one adhesive side of the double-backed adhesive tape onto one flat side of the flat ribbon cable.

29. A method as claimed in claim 24 wherein substantially all of the parts and tools needed to install a table-based wired information system are organized as a do-it-yourself kit.